

## Magnetoflow® Mag Meter

## Cable Splice Kits

# Application Brief

This application brief is a guideline for installation of the Magnetoflow® Mag meter - Cable Splice Kit. The cable splice kit is utilized to repair damaged cable or extending of existing cable when the Mag meter installed has the submersible option. The cable between the splice kit and the Primo® amplifier is not included and must be ordered separately.

This application brief describes the bracket mounting and component assembly installation and wiring:

### BRACKET MOUNTING

The mounting bracket on the splice kit junction box can be mounted in two methods: Underneath the junction box (see Figure 1) or behind the junction box (see Figure 2.)

1. Slide the rubber gasket in between the junction box and metal bracket to create a sealant for fluids not to enter the connection hole. The mounting bracket is mounted behind the junction box. The small part of the metal bracket plate is placed on the bottom of the junction box and the larger part of the metal bracket plate screws on the back of the junction box.

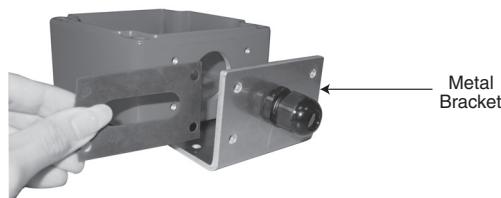


Figure 1

2. The mounting bracket can also be mounted with the small part of the metal bracket plate placed on the bottom of the junction box and the larger part of the metal bracket plate screwed on a different surface.

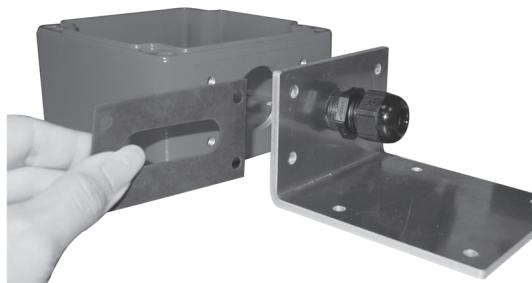


Figure 2

### COMPONENT ASSEMBLY

Each cable splice kit includes the following items:

1. Junction Box enclosure and cover with four screws
2. Cable Connection Terminal Board with four screws
3. Rubber Gasket
4. Cable Connector
5. Optional 3M Scotchcast 2112 re-enterable electrical insulating resin

Kit without resin 65568-001

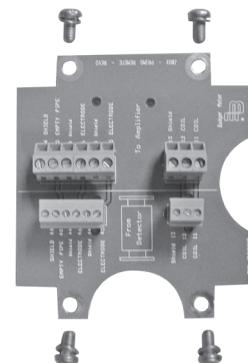
Kit with resin 65568-002

(NOTE: The resin is only used if the Splice Kit Assembly is used in an area that is prone to temporary submergence.)

There are tools that are needed when assembling the kit: an Allen wrench, Phillips screwdriver and a small flat head screwdriver.

If any of the components are missing, please contact your Badger Meter representative at (877) 243-1010.

1. The connection terminal board is assembled to the junction box with (4) screws. (Refer to Figure 4 for proper orientation of PC board.)



3. After completion of the wiring operation, the assembly should look like Figure 5.

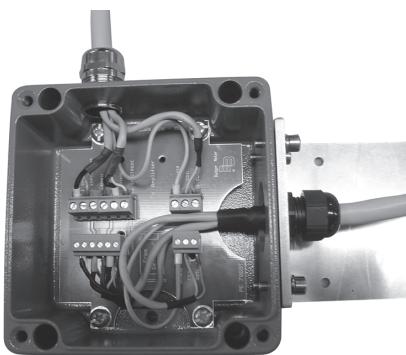


Figure 5

If the optional resin was not ordered, skip to step #8.

(NOTE: The resin is only used if the Splice Kit Assembly is used in an area that is prone to temporary submergence.)

4. Next, grab the 3M™ two-part Unipak™ bag of re-enterable electrical insulating resin. Grip the center of the bag, where the divider stripe is positioned and firmly pull the bag apart until the divider stripe is detached. Knead the bag with your hands for several seconds until the resin is fully mixed. (Refer to Figure 6)



Figure 6

5. Cut the bag open with scissors or a cutting blade. The mixture is ready to be poured in the junction box.



Figure 7

6. Pour the entire bag of compound in the junction box. Do not expect the resin to completely cover the junction box.



Figure 8

7. Wires not completely covered by the resin can be easily submerged by pushing the wires down with a screwdriver.

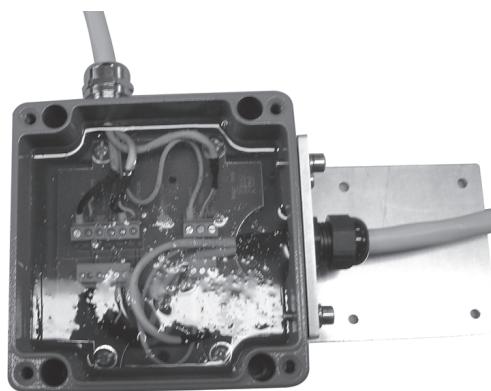


Figure 9

Allow 2 hours for set-up. Total cure time is 24 hours. (NOTE: The lid can be screwed to the junction box after 2 hours.)

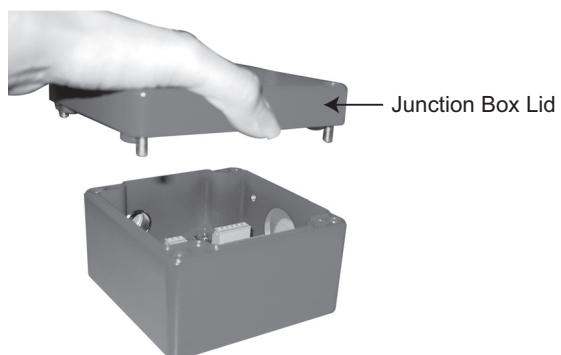


Figure 10

8. Assemble the junction box lid to the main junction box enclosure. The assembly is now complete. The junction box can be mounted at the proper designated area.

**REMOTE MOUNTED  
PRIMO AMPLIFIER**

CABLE TO  
AMPLIFIER

B

JUNCTION BOX TO EXTEND CABLE LENGTH FROM DETECTOR TO PRIMO AMPLIFIER OR TO SPLICED DAMAGED CABLE

B

**WIRING DIAGRAM FOR SPLICE KIT JUNCTION BOX (PRINTED CIRCUIT BOARD WIRING)**

**Legend:**

- From Detector:** Gray (CUT OFF), Black (44) Shield, Pink (40)
- From Electrode:** Brown (46) Electrode, Black (44) Shield, White (45) Electrode
- From Flow Meter:** Green/Yellow (13) Overall Shield, Yellow (12), Green (11), Shield (CUT-OFF)
- To Amplifier:** Shield, 44, 40, 44, 46, 44, 45, 13, 12, 11
- Overall Shield:** Grey (CUT OFF), Black (44) Shield, Pink (40), EMPTY PIPE, Shield, ELECTRODE, Shield, ELECTRODE, ELECTRODE, ELECTRODE, GREEN/YELLOW (13) Overall Shield, YELLOW (12), GREEN (11), Shield (CUT-OFF)

**Callouts:**

- CABLE SPLICING KIT:** Shows a close-up of three wires being spliced. Labels: 44, 40, 44, 46, 44, 45.
- APPLICATION DATA SHEET TAB-184-01:** Shows a close-up of four wires being spliced. Labels: SHIELD, EMPTY PIPE, Shield, ELECTRODE.

**Annotations:**

- 3:** Located at the bottom center of the diagram.
- SPICE KIT JUNCTION BOX (PRINTED CIRCUIT BOARD WIRING):** Located on the right side of the junction box outline.
- CABLE FROM FLOW METER DETECTOR:** Located on the right side of the junction box outline.
- ⚠:** A warning symbol consisting of a triangle with a exclamation mark inside.

JUNCTION BOX MOUNTED  
TO FLOW METER DETECTOR

CABLE FROM FLO  
METER DETECTOR

**SPICE KIT JUNCTION BOX  
(PRINTED CIRCUIT BOARD WIRING)**

**APPLICATION DATA SHEET  
IAB-184-01**

CARBON TAXES

**NOTE: IF CABLE IS BEING  
EXTENDED, CABLE MUST  
BE ORDERED SEPARATELY**

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Please see our website at  
[www.badgermeter.com](http://www.badgermeter.com)  
for specific contacts.

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**BadgerMeter, Inc.**  
P.O. Box 245036, Milwaukee, WI 53224-9536  
Telephone: (414) 355-0400 / (877) 243-1010  
Fax: (414) 355-7499 / (866) 613-9305  
[www.badgermeter.com](http://www.badgermeter.com)